

Coldwater River National Wildlife Refuge
Summary – 2009

Coldwater River National Wildlife Refuge (CWR) is a 2,694-acre refuge located south of Crowder and northwest of Charleston in the delta region of Mississippi. Most of the refuge was historically bottomland hardwood forest that was cleared within the last 40 years for agricultural purposes. The northern portion of the refuge consists of 420 acres of abandoned catfish ponds. When the U.S. Fish and Wildlife Service purchased the refuge in the mid-1990's, the bulk of the land was reforested and the catfish ponds were converted to moist-soil units which were managed for waterfowl. Currently, the majority of the units are actively managed, while several are kept flooded and dominated by vegetation such as black willow, buttonbush, and soft rush.

During the summer of 2009, staff at the North Mississippi Refuges Complex collected three complete samples and two partial samples of metamorphs on CWR. Table 1 below summarizes the sampling effort for 2009.

Table 1: Summary of metamorph collections from Coldwater River NWR.

Date	Site	Species	Number Collected	Number Abnormal
5/27/09	Unit Q	<i>Bufo woodhousii fowleri</i>	60	1
5/27/09	Unit Q	<i>Rana sphenocephala</i>	1	1
5/27 – 29/09	Unit R	<i>Rana sphenocephala</i>	37	4
6/18/09	Unit F	<i>Bufo woodhousii fowleri</i>	66	3
7/8/09	Unit P	<i>Acris crepitans</i>	55	2

Most abnormalities were missing toe tips or other foot abnormalities. However, one *A. crepitans* with a missing eye and one *R. sphenocephala* with a lesion at the base of its tail were collected. All specimens except the aforementioned *Rana* were sent to Dr. Mike Lannoo for radiography.

Units P and R are units that are permanently flooded and have dense stands of willow over portions of the units. Units F and Q were drawn down early this year (beginning in mid-March with only small pools of water remaining at the time of sampling). In 2008, both unit F and Q were treated with UltraBlazer herbicide (acifluorfen) to control coffeeweed at a rate of 1 pint of UltraBlazer per acre.

In addition to the above collections, these sites and others were checked periodically April - July to determine when collecting a sample would be feasible. It is interesting to note that a researcher working on the refuge in September captured a large number of young *R. catesbeiana*. Although most were beyond the maximum size allowed for this study, it may be useful to remember for timing future collections if *R. catesbeiana* is a targeted species.

The following people participated in sample collection or processing: Becky Rosamond, Mark Williams, Erin Wheeler, Taylor Ramagos, and Sidney Townes.



FY09 FROG SPECIMEN TRACKING LOG

[illegible]



DATA COLLECTION FORM

Date: 5/27/2009

Collectors: Becky Rosamond

Refuge: Coldwater River NWR

Taylor Ramagos

Site ID: CWR02 (Unit Q)

Air Temp

(C°)

Water Temp

(C°)

28

27

Start time: 11:56

Egg Masses Present: none observed

Water level (select from the following):

End time: 12:40

Egg Mass Water Depth (cm): N/A

deep

shallow

drying

dried up

Weather: sunny, hot,

Egg Mass Species ID Code(s): N/A

(> 3ft in some
areas)(< 3ft
throughout)(between 3 ft
and dry) (no water)

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	BFOW	14	1	45				
2	BFOW	14	0	45				
3	BFOW	14	0	45				
4	BFOW	13	0	45				
5	BFOW	12	4	44				
6	BFOW	14	0	45				
7	BFOW	14	1	45				
8	BFOW	11	1	45				
9	BFOW	13	1	45				
10	BFOW	14	0	45				
11	BFOW	13	1	45				
12	BFOW	13	1	45				
13	BFOW	12	4	44				
14	BFOW	13	1	45				
15	BFOW	12	6	43				
16	BFOW	13	0	45				
17	BFOW	13	1	45				
18	BFOW	13	6	43				
19	BFOW	14	8	43				
20	BFOW	14	2	44				
21	BFOW	13	2	44				
22	BFOW	13	1	44				
23	BFOW	12	6	43				
24	BFOW	14	0	45				
25	BFOW	13	0	44				
26	BFOW	13	0	45				
27	BFOW	13	1	45				
28	BFOW	13	1	44				
29	BFOW	14	0	45				
30	BFOW	12	1	45				
31	BFOW	14	0	45				
32	BFOW	13	2	45				



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River Collectors : Becky Rosamond
Date : 5/27/2009 Taylor Ramagos
Site ID : CWR02 (Unit Q)

Start Time : 11:56 a.m. Air (°C) : 28 Weather : sunny, hot, and humid
End Time : 12:40 p.m. H₂O (°C) : 27

Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
Latitude : N 34.09740 Make of GPS unit : Garmin
Longitude : W 90.13313 Model of GPS unit : 3+

Describe where coordinates were taken in relation to wetland :

Coordinates taken due east of site, on pond levee.

Area (m²) : 5,000 Water level (select from) : deep shallow drying dried up
(> 3ft in some (< 3ft (between 3 (no water)
areas) throughout) ft and dry)
% Canopy 0
Cover:

Habitat type (Select from list) : Man-made Pond

Contaminants of Concern (Select from list) :

Pesticides (recent)
Pesticides (historic)

Surrounding Land Use (Select from list) :

North : Waterbody/Riparian Corridor
East : Waterbody/Riparian Corridor
South : Waterbody/Riparian Corridor
West : Waterbody/Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR02-W-052709
CWR02-N-052709

CWR02-SW-052709
CWR02-SE-052709

Comments :

Site sprayed with UltraBlazer herbicide in summer '08 as part of a study with ARMI (USGS). Area currently heavily vegetated with grasses and smartweed. Some small clumps of willow saplings in sample area. Shallow water covering wester end, water primarily in ruts in sample area.



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River Collectors : Becky Rosamond
Date : 5/27/2009 Taylor Ramagos
Site ID : CWR02 (Unit Q)

Start Time : 11:56 a.m. Air (°C) : 28 Weather : sunny, hot, and humid
End Time : 12:40 p.m. H₂O (°C) : 27

Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
Latitude : N 34.09740 Make of GPS unit : Garmin
Longitude : W 90.13313 Model of GPS unit : 3+

Describe where coordinates were taken in relation to wetland :

Coordinates taken due east of site, on pond levee.

Area (m²) : 5,000 Water level (select from) : deep shallow drying dried up
% Canopy 0 (> 3ft in some (< 3ft (between 3 (no water)
Cover: areas) throughout) ft and dry)

Habitat type (Select from list) : Man-made Pond

Contaminants of Concern (Select from list) :

Pesticides (recent)
Pesticides (historic)

Surrounding Land Use (Select from list) :

North : Waterbody/Riparian Corridor
East : Waterbody/Riparian Corridor
South : Waterbody/Riparian Corridor
West : Waterbody/Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR02-W-052709
CWR02-N-052709

CWR02-SW-052709
CWR02-SE-052709

Comments :

Site sprayed with UltraBlazer herbicide in summer '08 as part of a study with ARMI (USGS). Area currently heavily vegetated with grasses and smartweed. Some small clumps of willow saplings in sample area. Shallow water covering wester end, water primarily in ruts in sample area.



DATA COLLECTION FORM

Date: 5/27/2009Collectors: Becky RosamondRefuge: Coldwater River NWRTaylor RamagosSite ID: CWR02 (Unit Q)

Air Temp

(C°)

Water Temp

(C°)

28

27

Start time: 11:56# Egg Masses Present: none observed

Water level (select from the following):

End time: 12:40Egg Mass Water Depth (cm): N/A

deep

shallow

drying

dried up

Weather: suny, hot,
humidEgg Mass Species ID Code(s): N/A(> 3ft in some
areas)(< 3ft
throughout)(between 3 ft
and dry) (no water)

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	BFOW	14	1	45				
2	BFOW	14	0	45				
3	BFOW	14	0	45				
4	BFOW	13	0	45				
5	BFOW	12	4	44				
6	BFOW	14	0	45				
7	BFOW	14	1	45				
8	BFOW	11	1	45				
9	BFOW	13	1	45				
10	BFOW	14	0	45				
11	BFOW	13	1	45				
12	BFOW	13	1	45				
13	BFOW	12	4	44				
14	BFOW	13	1	45				
15	BFOW	12	6	43				
16	BFOW	13	0	45				
17	BFOW	13	1	45				
18	BFOW	13	6	43				
19	BFOW	14	8	43				
20	BFOW	14	2	44				
21	BFOW	13	2	44				
22	BFOW	13	1	44				
23	BFOW	12	6	43				
24	BFOW	14	0	45				
25	BFOW	13	0	44				
26	BFOW	13	0	45				
27	BFOW	13	1	45				
28	BFOW	13	1	44				
29	BFOW	14	0	45				
30	BFOW	12	1	45				
31	BFOW	14	0	45				
32	BFOW	13	2	45				



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River Collectors : Becky Rosemond
 Date : 5/27/09 Taylor Ramagos
 Site ID : Q

Start Time : 11:56 am Air (°C) : 83°F Weather : Sunny, hot, humid
 End Time : 12:40 pm H₂O (°C) : 80°F

Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
 Latitude : 34.09740 N Make of GPS unit : Garmin
 Longitude : 90.13313 W Model of GPS unit : 3+

Describe where coordinates were taken in relation to wetland :

adjacent (east)

Area (m²) : 5,000 m² ^{sprayed} Water level (select from) : deep shallow drying dried up
 % Canopy Cover: 0 (> 3ft in some areas) (< 3ft throughout) (between 3 ft and dry) (no water)

Habitat type (Select from list) : Man-made pond

Contaminants of Concern (Select from list) :

None suspected

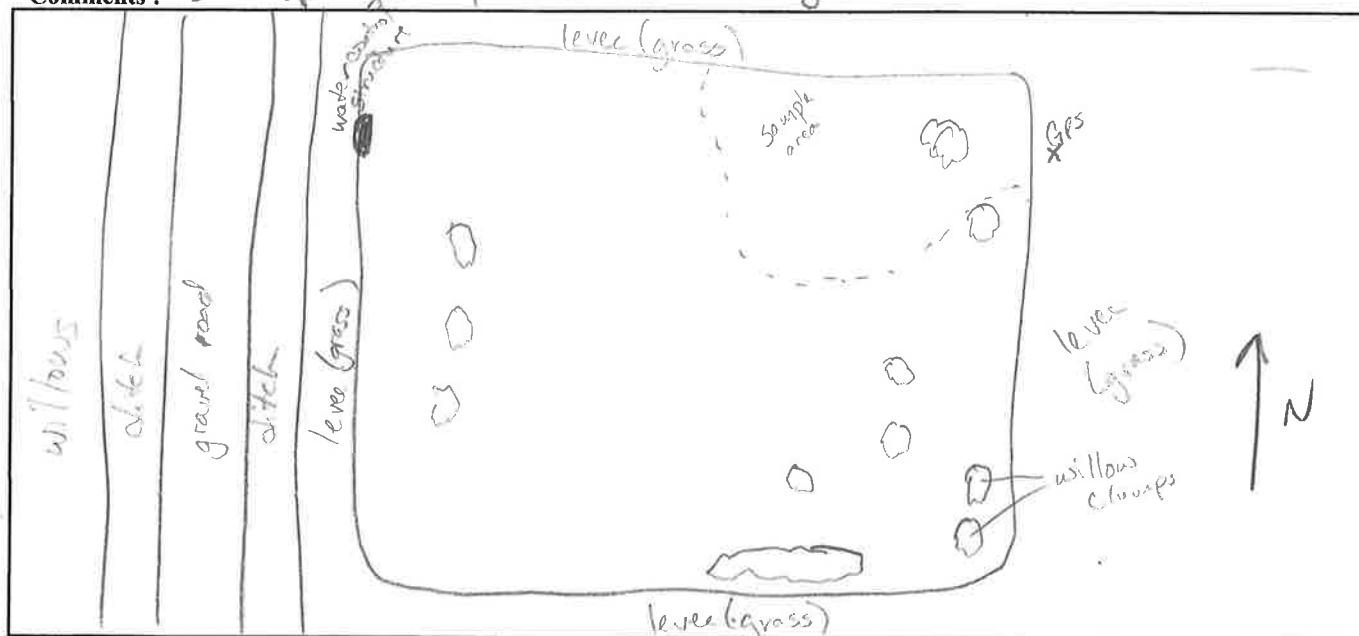
Surrounding Land Use (Select from list) :

North : water body / riparian corridor (check)
 East :
 South :
 West :

Site Photo Filenames (SiteID-direction facing-DATE) :

① W ③ SW
 ② N ④ SE

Comments : Site sprayed w/ UltraBlazer last year



Area heavily vegetated - mainly grasses + smart weed w/ willows along + shallow water covering western end, water in ruts primarily in sample area.



DATA COLLECTION FORM

Date: 5/27/07
 Refuge: CWR
 Site ID: CWR 02 (Unit 2)

Collectors: Becky Rosemond
Taylor Ramagos

Air Temp (°C) _____
 Water Temp (°C) _____

Start time: 11:56a# Egg Masses Present: none observed

Water level (select from the following):

deep (> 3ft in some areas) shallow (< 3ft throughout) drying (between 3 ft and dry) dried up (no water)

End time: 12:40pEgg Mass Water Depth (cm): N/AWeather: Sunny, hot, humid Egg Mass Species ID Code(s): N/A

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	BFOW	14	1	45				
2	BFOW	14	0	45				
3	BFOW	14	0	45				
4	BFOW	13	0	45				
5	BFOW	12	4	44				
6	BFOW	14	0	45				
7	BFOW	14	1	45				
8	BFOW	11	1	45				
9	BFOW	13	1	45				
10	BFOW	14	0	45				
11	BFOW	13	1	45				
12	BFOW	13	1	45				
13	BFOW	12	4	44				
14	BFOW	13	1	45				
15	BFOW	12	6	43				
16	BFOW	13	0	45				
17	BFOW	13	1	45				
18		13	6	43				Died in container
19		14	8	43				Died in container
20		14	2	44				
21		13	2	44				
22		13	1	44				
23		12	6	43				
24		14	0	45				
25		13	0	44				
26		13	0	45				
27		13	1	45				
28		13	1	44				

1. Frog #: Number frogs 1,2,3,... for each species.
2. Process each frog.
3. If abnormal, assign a unique Abnormal Frog ID:
 Region Number (R4) - 5 character SiteID -
 6 digit collection date - Species Code -
 3 digit Frog # from this collection.

Key Measurements of Tadpoles/Metamorphs



SVL - Snout-Vent Length TAL - Total Length TL - Total Length
 TL - Tip of the snout to the point where the lateral surface of the tail meets the body.
 TAL - From where the lateral surface of the tail meets the body to the tip of the tail.

Example Abnormal Frog ID: R4-OVF02-060403-RASP-002 wo TAL - First where the lateral surface of the tail meets the body to the tip of the tail.
 Region 4, Overflow NWR, site 02, June 4, 2003, Rana sphenoccephala, frog #002

4. Fill out an Abnormal Frog Sheet for each abnormal frog found.

Incidental Species Encountered: narrowmouth toad tadpoles, snails,

Comments:

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
29	BFGW	14	0	45				
30		12	1	45				
31		14	0	45				
32		13	2	45				
33		12	8	43	✓	✓	001	left rear foot missing toes 2,4.
34		13	0	45				
35		13	0	45				
36		14	2	44				Dead in container
37		14	0	45				
38		13	2	44				
39		15	0	45				
40		14	0	45				
41		14	0	45				
42		12	0	45				
43		12	1	45				
44		14	2	44				
45		13	7	43				
46		12	8	44				
47		14	0	45				
48		13	0	45				
49		13	2	44				
50		13	0	45				
51		13	6	44				
52		12	0	45				
53		14	0	45				
54		13	2	44				
55		12	4	44				
56		13	6	44				
57		13	5	44				
58		12	5	44				
59		14	3	44				
60		13	0	45				
	RASP	33	0	46	✓	✓	RH-CWRBZ-052709-RASP	Right Rear leg toe 4 Bone stuck out

CWR02-SE-052709



CWR02-W-052709



CWR02-N-052709



CWR02-SW-052709



W 1159

N 1200

SE 1201

SW 1201



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River NWR
Collectors: B. Rosamond, T. RamagosDate: 5/27/09
Site/Location: CWR02Abnormal Frog ID Number: R4-CWR02-052709-BFDW-001

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
✓		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

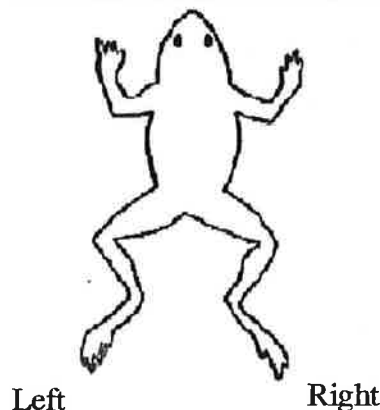
TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

left rear foot missing portions of toes
2+4

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)



Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater RiverDate: 5/27/09Collectors: B. Raymond, T. Ramagos Site/Location: CWR02Abnormal Frog ID Number: R4-CWR02-052709-RASP-001

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
	✓	Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

Missing tip of toe 4 on right rear leg - bone still present but soft tissue gone



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River **Collectors :** Becky Rosamond (5/27, 5/28)
Date : 5/27/2009, 5/28/2009, 5/29/2009 Taylor Ramagos (5/27)
Site ID : CWR03 (Unit R) Mark Williams (5/28, 5/29)

Start Time : 1:10 pm, 2:30 pm, 10:35 am **Air (°C) :** 26 **Weather :** sunny, hot
End Time : 2:31 pm, 3:18 pm, 11:35 am **H₂O (°C) :** 31

Datum : WGS 84 decimal degrees (hddd.ddddd°) **Elevation (+/- m) :**
Latitude : N 34.09677 **Make of GPS unit :** Garmin
Longitude : W 90.13313 **Model of GPS unit :** 3+

Describe where coordinates were taken in relation to wetland :

Just west of sample area on levee.

Area (m²) : 800 **Water level (select from) :** deep shallow drying dried up
(> 3ft in some (< 3ft (between 3 (no water)
areas) throughout ft and dry)
% Canopy Cover: 0

Habitat type (Select from list) : Man-made pond

Contaminants of Concern (Select from list) :

Pesticides (historic)

Surrounding Land Use (Select from list) :

North : Waterbody/Riparian Corridor
East : Waterbody/Riparian Corridor
South : Waterbody/Riparian Corridor
West : Waterbody/Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR03-E-052709
CWR03-N-052709

CWR03-S-052709

Comments :

Sampled edge of unit in flooded grasses and rushes. Other species present included sirens (juvenile), crayfish, mosquitofish, predaceous diving beetles, giant water bugs, larval dragonflies, larval diving beetles, and fishing spiders. Incomplete sample.



DATA COLLECTION FORM

Date: 5/27/2009, 5/28/2009, 5/29/2009Collectors: Becky Rosamond (5/27, 5/28)Refuge: Coldwater River NWRTaylor Ramagos (5/27)Site ID: CWR03 (Unit R)Mark Williams (5/28, 5/29)Air Temp
(C°)Water Temp
(C°)

26

31

Start time: 10:35 am

1:10 pm,

2:30 pm,

2:31 p.m.,

3:18 pm,

Egg Masses Present: none observed

Water level (select from the following):

deep (> 3ft in some areas) shallow (< 3ft throughout) drying (between 3 ft and dry) dried up (no water)

End time: 11:35 amWeather: sunnyEgg Mass Water Depth (cm): N/AEgg Mass Species ID Code(s): N/A

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	RASP	31	4	44				
2	RASP	32	1	45				
3	RASP	30	9	45				
4	RASP	32	0	45				
5	RASP	32	58	42				
6	RASP	28	40	43				
7	RASP	29	3	44				
8	RASP	31	4	44				
9	RASP	30	9	44	X	X	R4-CWR03-052709-RASP-001	Missing part of toe 4 on right rear foot.
10	RASP	33	5	45				
11	RASP	32	58	42				
12	RASP	32	49	43				
13	RASP	31	7	44	X	X	R4-CWR03-052709-RASP-002	Lesion on left side of tail on dorsal surface at base.
14	RASP	31	0	45				
15	RASP	33	35	44				tail injury - fresh
16	RASP	31	6	44	X	X	R4-CWR03-052709-RASP-003	Missing part of toe 2 on right rear foot.
17	RASP	35	39	43				
18	RASP	30	6	44				
19	RASP	29	42	42				
20	RASP	30	38	42				
21	RASP	35	6	45				
22	RASP	31	7	45				
23	RASP	31	36	44				
24	RASP	30	0	46				
25	RASP	33	38	43				
26	RASP	30	49	43				
27	RASP	29	54	43				
28	RASP	32	36	44				
29	RASP	27	16	44				
30	RASP	32	27	44				



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River Collectors : Becky Rosamond (5/27, 5/28)
Date : 5/27/2009, 5/28/2009, 5/29/2009 Taylor Ramagos (5/27)
Site ID : CWR03 (Unit R) Mark Williams (5/28, 5/29)

Start Time : 1:10 pm, 2:30 pm, 10:35 am Air (°C) : 26 Weather : sunny, hot
End Time : 2:31 pm, 3:18 pm, 11:35 am H₂O (°C) : 31

Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
Latitude : N 34.09677 Make of GPS unit : Garmin
Longitude : W 90.13313 Model of GPS unit : 3+

Describe where coordinates were taken in relation to wetland :
Just west of sample area on levee.

Area (m²) : 800 Water level (select from) : deep shallow drying dried up
(> 3ft in some (< 3ft (between 3 (no water)
areas) throughout ft and dry)
% Canopy 0
Cover: _____

Habitat type (Select from list) : Man-made pond

Contaminants of Concern (Select from list) : Surrounding Land Use (Select from list) :
Pesticides (historic) North : Waterbody/Riparian Corridor
East : Waterbody/Riparian Corridor
South : Waterbody/Riparian Corridor
West : Waterbody/Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :
CWR03-E-052709 CWR03-S-052709
CWR03-N-052709

Comments :

Sampled edge of unit in flooded grasses and rushes. Other species present included sirens (juvenile), crayfish, mosquitofish, predaceous diving beetles, giant water bugs, larval dragonflies, larval diving beetles, and fishing spiders.

Incomplete Sample



DATA COLLECTION FORM

Date: 5/27/2009, 5/28/2009, 5/29/2009Collectors: Becky Rosamond (5/27, 5/28)Refuge: Coldwater River NWRTaylor Ramagos (5/27)Site ID: CWR03 (Unit R)Mark Williams (5/28, 5/29)Air Temp
(C°)Water Temp
(C°)

26

31

Start time: 10:35 am

1:10 pm,

2:30 pm,

2:31 p.m.,

3:18 pm,

11:35 am

Egg Masses Present: none observed

Water level (select from the following):

deep (> 3ft in some areas) shallow (< 3ft throughout) drying (between 3 ft and dry) dried up (no water)

End time: 11:35 amWeather: sunnyEgg Mass Water Depth (cm): N/AEgg Mass Species ID Code(s): N/A

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	RASP	31	4	44				
2	RASP	32	1	45				
3	RASP	30	9	45				
4	RASP	32	0	45				
5	RASP	32	58	42				
6	RASP	28	40	43				
7	RASP	29	3	44				
8	RASP	31	4	44				
9	RASP	30	9	44	X	X	R4-CWR03-052709-RASP-001	Missing part of toe 4 on right rear foot.
10	RASP	33	5	45				
11	RASP	32	58	42				
12	RASP	32	49	43				
13	RASP	31	7	44	X	X	R4-CWR03-052709-RASP-002	Lesion on left side of tail on dorsal surface at base.
14	RASP	31	0	45				
15	RASP	33	35	44				tail injury - fresh
16	RASP	31	6	44	X	X	R4-CWR03-052709-RASP-003	Missing part of toe 2 on right rear foot.
17	RASP	35	39	43				
18	RASP	30	6	44				
19	RASP	29	42	42				
20	RASP	30	38	42				
21	RASP	35	6	45				
22	RASP	31	7	45				
23	RASP	31	36	44				
24	RASP	30	0	46				
25	RASP	33	38	43				
26	RASP	30	49	43				
27	RASP	29	54	43				
28	RASP	32	36	44				
29	RASP	27	16	44				
30	RASP	32	27	44				



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Incomplete sample

Refuge : Coldwater River

Collectors : Becky Rosamond 5/27 + 5/28

Date : 5/27/09

Taylor Rosamond 5/27

Site ID : R (western edge)

Mark Williams 5/28 + 5/29

Start Time : 5/27 1:10 pm | 5/28 2:30 pm | 5/29 10:35 am

Air (°C) : 78°F

Weather : sunny, hot

End Time : 2:31 pm | 3:18 pm | 11:35 am

H₂O (°C) : 88°F

Datum : WGS 84 decimal degrees (hddd.ddddd°)

Elevation (+/- m) :

Latitude : 34.09677 N

Make of GPS unit :

Longitude : 90.13313

Model of GPS unit :

Describe where coordinates were taken in relation to wetland :

just west on levee

Area (m²) : 8,000 m²

Water level (select from) :

deep <input checked="" type="radio"/> shallow <input checked="" type="radio"/> drying <input type="radio"/> dried up <input type="radio"/>

(> 3ft in some areas) (< 3ft throughout) (between 3 ft and dry) (no water)

% Canopy Cover: _____

Habitat type (Select from list) :

Man-made pond

Contaminants of Concern (Select from list) :

Surrounding Land Use (Select from list) :

North : _____

East : _____

South : _____

West : _____

Site Photo Filenames (SiteID-direction facing-DATE) :

①

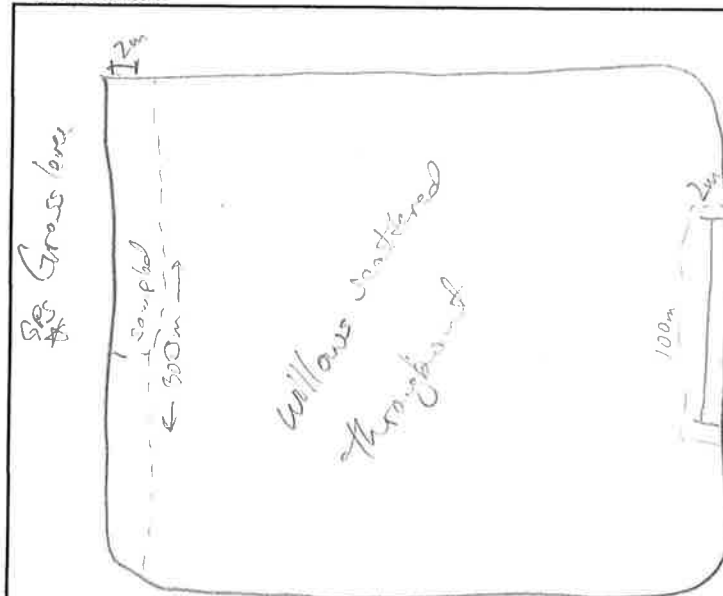
E

②

N

S

Comments :



sampled edge of unit
 in flooded grasses & rushes
 also present, sirens (juv)
 crayfish, mosquitofish





DATA COLLECTION FORM

Date: 5/27/09
 Refuge: CWR
 Site ID: CWR03 (Unit R)

Collectors: Becky Rosamond
Taylor Ramagos
Mark Williams

Air Temp
(C°)

Water Temp
(C°)

Start time: 1:10 p 10:35 a

Egg Masses Present: none observed

End time: 2:31 p 11:35 c

Egg Mass Water Depth (cm): N/A

Weather: sunny

Egg Mass Species ID Code(s): N/A

Water level (select from the following):

deep (> 3ft in some areas) shallow (< 3ft throughout) drying (between 3 ft and dry) dried up (no water)

R4-CWR03-052709-RASP-

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	RASP	31	4	44				
2		32	1	45				
3		31	9	45				
4		32	0	45				
5		32	58	42				
6		28	40	43				
7		29	3	44				
8		31	4	44				
9		30	9	44	✓	✓	001	Right Rear toe 1 short
10		33	5	45				
11		32	58	42				
12		32	49	43				
13		31	7	44	✓	✓	002	lesion on tail-base
14		31	0	45				
15		33	35	44				tail injury
16		31	6	44	✓	✓	003	toe 2 short, hind-right rear
17		35	39	43				
18		30	6	44				
19		29	42	42				
20		30	38	42				
21		25	6	45				
22		31	7	45				
23		31	36	44				
24		30	0	46				
25		33	38	43				
26		30	49	43				
27		29	54	43				
28		32	36	44				

- Frog #: Number frogs 1,2,3,... for each species.
- Process each frog.
- If abnormal, assign a unique Abnormal Frog ID:
 Region Number (R4) - 5 character SiteID -
 6 digit collection date - Species Code -
 3 digit Frog # from this collection.

Key Measurements of Tadpoles/Metamorphs



SVL - Snout-Vent Length, TL - Total Length, TAL - Tail Length
 TL - Tip of the snout to the point where the lateral midline of the tail meets the body.
 TAL - Point where the lateral midline of the tail meets the body to the tip of the tail.

Incidental Species Encountered:

Comments:

Example Abnormal Frog ID: R4-OVF02-060403-RASP-002 wo
 Region 4, Overflow NWR, site 02, June 4, 2003, *Rana sphenoccephala*, frog #002

- Fill out an Abnormal Frog Sheet for each abnormal frog found.

[illegible]

CWE03-N-052709



CWE03-E-052709



CWE03-S-052709





U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 5/27/09
Collectors: B. Rosemond, J. Ramegas Site/Location: CWR03

Abnormal Frog ID Number: R4-CWR03-052709-EASP-001

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
	✓	Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

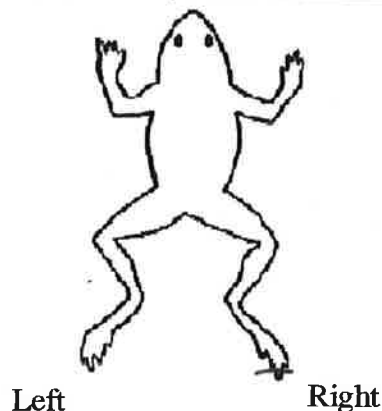
JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:
Missing tip of toe 4 on right rear foot.

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)



Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater RiverDate: 5/27/01Collectors: B. Rosemond, T. Parnagis Site/Location: CWR03Abnormal Frog ID Number: R4-CWR03-052709-RASP-002

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
✓	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:
lesion on base of tail



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River
Collectors: B. Rosamond, T. RamagosDate: 5/27/09
Site/Location: CWR03Abnormal Frog ID Number: R4-CWR03-052709-EASP-003

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
	✓	Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <u>damaged</u> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:
toe 2, Missing tip of right rear foot.



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River
Collectors: Mark Williams

Date: 5/29/09
Site/Location: CWR 03

Abnormal Frog ID Number: _____

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
2 mm present		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

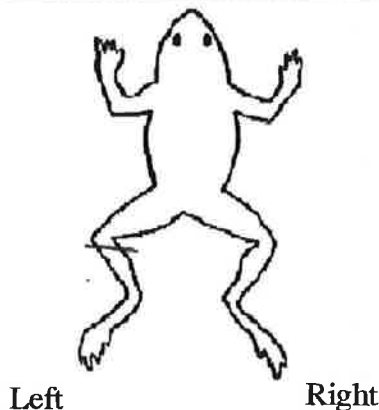
JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:
2 mm of tibiofibula present. No calf muscle present.

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)



Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River NWR Collectors : Becky Rosamond, Mark Williams, Erin Wheeler, and
Date : 6/18/2009 Sidney Townes
Site ID : CWR004

Start Time : 09:49 a.m. Air (°C) : 32.2 Weather : sunny, hot, and humid.
End Time : 10:07 a.m. H₂O (°C) : 31.1
Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
Latitude : N 34.1051 Make of GPS unit : Garmin
Longitude : W 90.13616 Model of GPS unit : III+

Describe where coordinates were taken in relation to wetland :

East of survey area.

Area (m²) : 1,000 Water level (select from) : deep shallow drying dried up
(> 3ft in some (< 3ft (between 3 (no water)
Cover: 0 areas) throughout ft and dry)

Habitat type (Select from list) : Man-made Pond

Contaminants of Concern (Select from list) :

Surrounding Land Use (Select from list) :

Pesticides (recent)

North : Waterbody / NO Riparian Corridor

East : Waterbody / Riparian Corridor

South : Waterbody / NO Riparian Corridor

West : Waterbody / NO Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR004-W-061809

CWR004-N-061809

CWR004-S-061809

Comments :

Unit largely vegetated with water primrose (*Ludwigia*) and clumps (some dense) of 2 - 5 year old willow. Area with standing water with little to no vegetation. Entire unit is 17 acres, but only approximately 1000 m2 searched.



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River NWR Collectors : Becky Rosamond, Mark Williams, Erin Wheeler, and
Date : 6/18/2009 Sidney Townes
Site ID : CWR004 (Pond F)

Start Time : 09:49 a.m. Air (°C) : 32.2 Weather : sunny, hot, and humid.
End Time : 10:07 a.m. H₂O (°C) : 31.1

Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
Latitude : N 34.1051 Make of GPS unit : Garmin
Longitude : W 90.13616 Model of GPS unit : III+

Describe where coordinates were taken in relation to wetland :

East of survey area.

Area (m²) : 1,000 Water level (select from) : deep shallow drying dried up
(> 3ft in some (< 3ft (between 3 (no water)
areas) throughout ft and dry)
% Canopy 0
Cover:

Habitat type (Select from list) : Man-made Pond

Contaminants of Concern (Select from list) :

Pesticides (recent)

Surrounding Land Use (Select from list) :

North : Waterbody / NO Riparian Corridor

East : Waterbody / Riparian Corridor

South : Waterbody / NO Riparian Corridor

West : Waterbody / NO Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR004-W-06182009

CWR004-N-06182009

CWR004-S-06182009

Comments :

Unit largely vegetated with water primrose (*Ludwigia*) and clumps (some dense) of 2 - 5 year old willow. Area with standing water with little to no vegetation. Entire unit is 17 acres, but only approximately 1000 m2 searched.



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : CWR Collectors : B. Rosemond
Date : 6/18/09 M. Williams
Site ID : Unit F E. Wheeler S. Townes
Start Time : 09:49 a.m. Air (°C) : 32.2°C 80°F Weather : sunny hot humid
End Time : 10:07 a.m. H₂O (°C) : 31.1°C 88°F
Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) :
Latitude : N 34.10570 Make of GPS unit : Garmin
Longitude : W 90.13616 Model of GPS unit : 3+

Describe where coordinates were taken in relation to wetland :

East of survey areaArea (m²) : 1000

Water level (select from) :

deep

shallow

drying

dried up

> 3ft in some
areas)< 3ft
throughout)(between 3
ft and dry)

(no water)

% Canopy

Cover: 0

Habitat type (Select from list) :

Contaminants of Concern (Select from list) :

Surrounding Land Use (Select from list) :

North :

East :

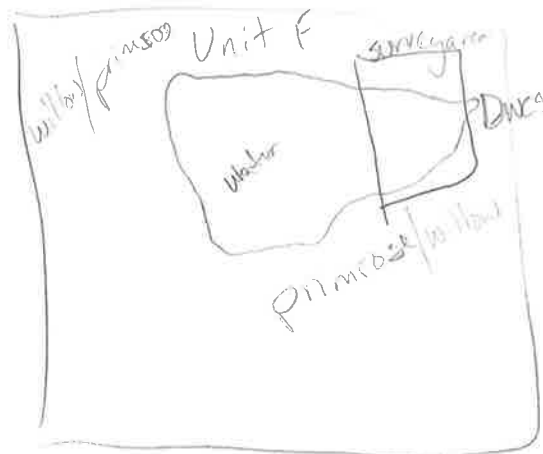
South :

West :

Site Photo Filenames (SiteID-direction facing-DATE) :

1) N2) S3) N

Comments :

AB



USFWS National Abnormal Amphibian Program

DATA COLLECTION FORM

Date: _____
 Refuge: _____
 Site ID: Unit F

Collectors: _____

Air Temp
(C°)

Water Temp
(C°)

Start time: _____

Egg Masses Present: _____

Water level (select from the following):

deep (> 3ft in some areas) shallow (< 3ft throughout) drying (between 3 ft and dry) dried up (no water)

End time: _____

Egg Mass Water Depth (cm): _____

Weather: _____

Egg Mass Species ID Code(s): _____

Frog#	Species Code	Length (mm)		Gosner Stage	Abnormal? (mark if Yes)	Preserved? (mark if Yes)	Abnormal Frog ID	Comments
		SVL	TAL					
1	BFW	8	0	46				
2		14						
3		11						
4		12						
5		13						
6		11						
7		10						
8		13						
9		13						
10		12						
11		11						
12		12						
13		15						
14		12						
15		11						
16		13						
17		15						
18		13						
19		10						
20		13						
21		13						
22		14						
23		14						
24		13						
25		12						
26		12						
27		11						
28		14						

1. Frog #: Number frogs 1,2,3,... for each species.

2. Process each frog.

3. If abnormal, assign a unique Abnormal Frog ID:

Region Number (R4) - 5 character SiteID -

6 digit collection date - Species Code -

3 digit Frog # from this collection.

Example Abnormal Frog ID: R4-OVF02-060403-RASP-002 w/ TAL - First where the lateral surface of the tail meets the body to the tip of the tail

Region 4, Overflow NWR, site 02, June 4, 2003, Rana sphenoccephala, frog #002

4. Fill out an Abnormal Frog Sheet for each abnormal frog found.

Key Measurements of Tadpoles/Metamorphs
Key M



BL = Body Length TAL = Tail Length SVL = Snout-Vent Length TL = Total Length
BL - Tip of the snout to the point where the lateral surface of the tail meets the body.
TAL - From where the lateral surface of the tail meets the body to the tip of the tail.

Incidental Species Encountered:

Comments:

DATA COLLECTION FORM

[illegible]

West



North



Unit F
Site CWR04

South

06/18/2009

Brow collection



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River
Collectors: B. Rosamond M. Williams,
E. Wheeler, S. TownesDate: 6/18/2009
Site/Location: CWR044 (Unit F)Abnormal Frog ID Number: R4-CWR04-061809-BFOW-042

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
	X	Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
	X	Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS: <u>Right front wrist and foot swollen and discolored; Toe 2 missing, toes 3 and 4 short</u>	
-------------------------------------------------------------------------------------------------------	--



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Caldwater River
 Collectors: B. Rosamond, M. Williams, E. Wheeler, S. Townes
 Abnormal Frog ID Number: R4-CWR04-061809-BFOW-OSO

Date: 7/30/09
 Site/Location: CWR004 (Unit F)

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
	X	Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:
<u>Right front foot, toes 1, 2, 4 short</u>



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River
 Collectors: B. Rosemond, M. Williams
E. Wheeler, S. Townes
 Abnormal Frog ID Number: R4-CWR04-061809-BFOW-062

Date: 6/18/2009
 Site/Location: CWR 004 (Unit F)

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
	X	Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal</i>)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: _____
Collectors: _____

Date: _____
Site/Location: _____

Abnormal Frog ID Number: _____

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

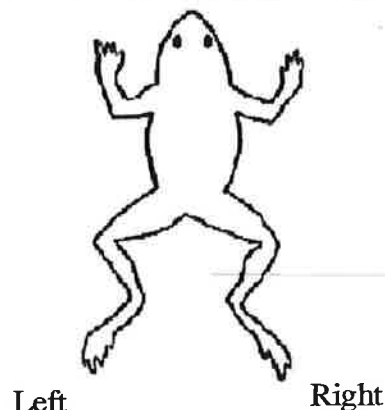
FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal</i>)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge : Coldwater River Collectors : Becky Rosamond
Date : 7/8/2009 Mark Williams
Site ID : _____

Start Time : 1148-BR; 1241-MW Air (°C) : 37 Weather : sunny, hot, and humid
End Time : 1300-BR and MW H₂O (°C) : 31

Datum : WGS 84 decimal degrees (hddd.ddddd°) Elevation (+/- m) : _____
Latitude : N 34.09936 Make of GPS unit : Garmin
Longitude : W 90.13025 Model of GPS unit : 3+

Describe where coordinates were taken in relation to wetland : _____

Area (m²) : 150 Water level (select from) : deep shallow drying dried up
(> 3ft in some (< 3ft (between 3 (no water)
areas) throughout ft and dry)
% Canopy 0
Cover: _____

Habitat type (Select from list) : Man-made Pond

Contaminants of Concern (Select from list) : _____

Surrounding Land Use (Select from list) :

Pesticides (historic)

North : Waterbody/Riparian Corridor

East : Waterbody/Riparian Corridor

South : Waterbody/Riparian Corridor

West : Waterbody/Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR05-W-070809

CWR05-N-070809

CWR05-S-070809

Comments :

[illegible]



USFWS National Abnormal Amphibian Program

SITE CHARACTERIZATION FORM

Refuge :	Coldwater River	Collectors :	Becky Rosamond
Date :	7/8/09		Made Williams
Site ID :	CWR 05 (Pond 8)		
Start Time :	BR 1148 MW 1241	Air (°C) :	37
End Time :	1300 1300	H ₂ O (°C) :	31
Weather :	sunny, hot, and humid		
Datum :	WGS 84 decimal degrees (hddd.ddddd°)	Elevation (+/- m) :	
Latitude :	N 34° 09936	Make of GPS unit :	Garmin
Longitude :	W 90° 13025	Model of GPS unit :	3+

Describe where coordinates were taken in relation to wetland :

Area (m²) : 150 Water level (select from) : deep shallow drying dried up
(> 3ft in some areas) (< 3ft throughout (between 3 ft and dry) (no water)

% Canopy Cover: 0

Habitat type (Select from list) : Man-made Pond

Contaminants of Concern (Select from list) :

Pesticides (historic)

Surrounding Land Use (Select from list) :

North : Waterbody/Riparian Corridor

East : Waterbody/Riparian Corridor

South : Waterbody/Riparian Corridor

West : Waterbody/Riparian Corridor

Site Photo Filenames (SiteID-direction facing-DATE) :

CWR05-W-070809

CWR05-N-070809

CWR05-S-070809

Comments :



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 7/8/2009
Collectors: Becky Rosamond; Mark Williams Site/Location: CWR05 (Pard)Abnormal Frog ID Number: R4-CWR05-070809-ACLR-037

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
<u>toe 5</u>		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 7/8/2009
Collectors: Berky Rosamond, Mark Williams Site/Location: CWR05 (Pond 0)Abnormal Frog ID Number: R4-CWR05-070809-ACCR-046

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
X		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

missing left eye

Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)

DATA COLLECTION FORM

Date: _____

Collectors: _____

Refuge: _____

Site ID: _____

Air Temp
(C)

Water Temp
(C°)

Start time: _____

Egg Masses Present:

Water level (select from the following):

End time: _____

Egg Mass Water Depth (cm): _____

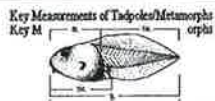
deep	shallow	drying	dried up
(> 3ft in some areas)	(< 3ft throughout)	(between 3 ft and dry)	(no water)

Weather:

Egg Mass Species ID Code(s):

[illegible]

1. Frog #: Number frogs 1,2,3,... for each species.
2. Process each frog.
3. If abnormal, assign a unique Abnormal Frog ID:
Region Number (R4) - 5 character SiteID -
6 digit collection date - Species Code -
3 digit Frog # from this collection.



BL = Body Length TAL = Tail Length SVL = Snout-Vent Length TL = Total Length
EL = Tip of the snout to the point where the lateral midline of the tail meets the body
TAL = Point where the lateral midline of the tail meets the body to the tip of the tail

Example Abnormal Frog ID: R4-OVP02-060403-RASP-002 wo TAIL: First where the lateral midline of the tail meets the body is the tip of the tail

4. Fill out an Abnormal Frog Sheet for each abnormal frog found.

Incidental Species Encountered:**Comments:**



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 6/18/2009
 Collectors: B. Rosamond M. Williams, Site/Location: CWR04 (Unit F)
E. Wheeler, S. Townes
 Abnormal Frog ID Number: R4-CWR04-061809-BFOW-042

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

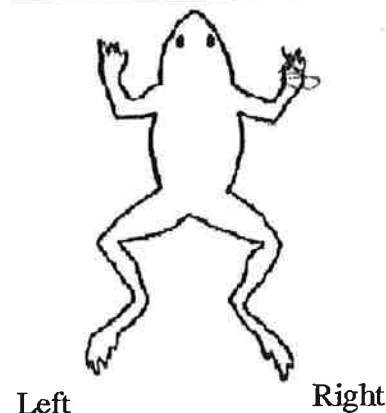
FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
	X	Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
	X	Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal</i>)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:
<i>Right front wrist and foot swollen and discolored; Toe 2 missing, toes 3 and 4 short</i>



Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 7/30/09
Collectors: B. Rosamond, M. Williams, E. Wheeler, S. Townes Site/Location: CWR004 (Unit F)
Abnormal Frog ID Number: R4-CWR04-061809-BFOW-050

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
	X	Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS: Right front foot, toes 1, 2, 4 short

Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Colquhoun River Date: 6/18/2009
 Collectors: B. Rosemond, M. Williams Site/Location: LWR 004 (Unit F)
E. Wheeler, S. Townes
 Abnormal Frog ID Number: R4-LWR04-061809-BFOW-062

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
	X	Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: _____
Collectors: _____

Date: _____
Site/Location: _____

Abnormal Frog ID Number: _____

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal</i>)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Cobowater River Date: 5/27/09
Collectors: B. Roseman, J. T. Remagos Site/Location: CWR03

Abnormal Frog ID Number: R4-CWR03-052709-RASP-001

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
	✓	Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

Missing tip of toe 4 on right rear foot.

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River
Collectors: B. Rosamond, J. RamagasDate: 5/27/09
Site/Location: CWR-03Abnormal Frog ID Number: R4-CWR03-052709-RASP-003

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
	✓	Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal</i>)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

Missing tip of right rear foot.



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

 Refuge: Coldwater River NWR
 Collectors: B. Rosemond, T. Ramagos

 Date: 5/27/09
 Site/Location: CWR02
Abnormal Frog ID Number: R4-CWR02-052709-BFDW-001

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
✓		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs - how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: damaged tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

left rear foot missing portions of toes
2+4



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Cobowater River Date: 5/27/09
Collectors: B. Raymond, T. Ramagos Site/Location: CWR02

Abnormal Frog ID Number: R4-CWR02-052709-RASP-001

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
	✓	Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:

Missing tip of toe 4 on right rear leg - bone still present but soft tissue gone

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 7/8/2009
Collectors: Becky Rosamond; Mark Williams Site/Location: CWR05 (Pond D)

Abnormal Frog ID Number: R4-CWR05-070809-ACLR-037

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
5		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

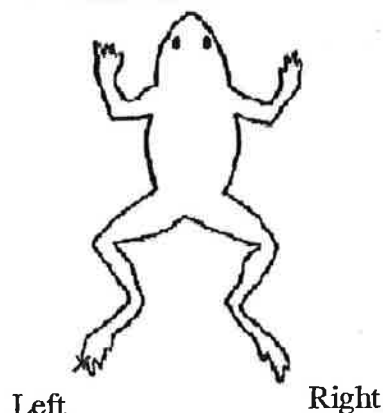
FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)



U.S. Fish and Wildlife Service - National Abnormal Amphibian Initiative

Refuge: Coldwater River Date: 7/8/2009
Collectors: Berky Rosamond, Mark Williams Site/Location: CWR 05 (Pond D)Abnormal Frog ID Number: R4-CWR05-070809-ACCR-046

Check boxes that best describe the abnormalities. Note descriptions should be with dorsal side up

EYES		
Left	Right	
		Smaller than normal
		Pupil abnormally shaped
		Unusual position (<i>describe</i>)
X		Missing iris, "Hollow Eye"
		Extra eye(s) (<i>describe</i>)
		Other (<i>describe</i>)

HIND LIMBS		
Left	Right	
		Entire limb present, unusual angle (twisted, rotated, etc. - <i>describe</i>)
		Entire limb present, abnormal size (atrophied or enlarged)
		Digits missing from foot (<i>specify digits</i>)
		Digits shortened, fused or clubbed
		Digits in abnormal location (<i>describe</i>)
		Extra digits (<i>describe</i>)
		Foot missing (tarsal bones)
		Complete calf (tibiofibula) present, abnormal musculature (enlarged or atrophied)
		Portion of calf missing (estimate length of calf present)
		Entire calf (tibiofibula) missing
		Complete thigh (femur) present, abnormal musculature (enlarged or atrophied)
		Portion of thigh (femur) missing, (estimate length of thigh present)
		Entire limb missing
		Other (<i>describe</i>)

OTHER ABNORMALITIES		
Left	Right	
		SPINE - curved to left or right (<i>describe</i>)
		WEBBING - fusion between thigh and calf (<i>describe</i>)
		Extra Limbs- how many, location (<i>describe</i>)
		Fresh Bleeding or Injuries (<i>describe</i>)
		Other (<i>describe</i>)

FRONT LIMBS		
Left	Right	
		Partial limb (<i>describe</i>)
		Foot missing
		Digits missing, fused or clubbed (<i>describe</i>)
		Complete calf present, abnormal musculature (enlarged or atrophied)
		Other (<i>describe</i>)

JAWS		
Left	Right	
		Lower jaw shortened
		Upper jaw shortened
		Other (<i>describe</i>)

TAIL (NOTE: <i>damaged</i> tails, such as missing or ragged tipped tails should be noted in comments section on data sheet, but not counted as abnormal)	
	kinked or bent tail
	cysts, lumps or growths
	other (<i>describe</i>)

TORSO	
	lumps / bumps
	abrasions
	bloated or swelling
	bruising or other discoloration
	other (<i>describe</i>)

COMMENTS:



Left

Right

Draw abnormalities found on diagram with dorsal side up (frog lying on its stomach)